Square Root Equations

Date_____ Period____

Solve each equation. Remember to check for extraneous solutions.

1) $3 = \sqrt{b - 1}$

2) $2 = \sqrt{\frac{x}{2}}$

3) $\sqrt{-8 - 2a} = 0$

4) $\sqrt{x + 4} = 0$

5) $5 = \sqrt{r - 3}$

6) $\sqrt{2m - 6} = \sqrt{3m - 14}$

7) $\sqrt{8k} = k$

8) $\sqrt{9 - b} = \sqrt{1 - 9b}$

9) $\sqrt{3 - 2x} = \sqrt{1 - 3x}$

10) $\sqrt{3k - 11} = \sqrt{5 - k}$

11) $(20-r)^{\frac{1}{2}} = r$

12) $(6b)^{\frac{1}{2}} = (8-2b)^{\frac{1}{2}}$

13) $\sqrt{56-r} = r$

14) $\sqrt{-10+7p} = p$

15) $(18-n)^{\frac{1}{2}} = \left(\frac{n}{8}\right)^{\frac{1}{2}}$

16) $\sqrt{2v-7} = v-3$

17) $-3 = (37-3n)^{\frac{1}{2}} - n$

18) $(-3-4x)^{\frac{1}{2}} - (-2-2x)^{\frac{1}{2}} = 1$

19) $x = 5 + (3x-11)^{\frac{1}{2}}$

20) $2 = \sqrt{3b-2} - \sqrt{10-b}$

 Name_____

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Solve each equation. Remember to check for extraneous solutions.

1) $3 = \sqrt{b - 1}$

{10}

2) $2 = \sqrt{\frac{x}{2}}$

{8}

3) $\sqrt{-8 - 2a} = 0$

{–4}

4) $\sqrt{x + 4} = 0$

{–4}

5) $5 = \sqrt{r - 3}$

{28}

6) $\sqrt{2m - 6} = \sqrt{3m - 14}$

{8}

7) $\sqrt{8k} = k$

{0, 8}

8) $\sqrt{9 - b} = \sqrt{1 - 9b}$

{–1}

9) $\sqrt{3 - 2x} = \sqrt{1 - 3x}$

{–2}

10) $\sqrt{3k - 11} = \sqrt{5 - k}$

{4}

11) $(20 - r)^{\frac{1}{2}} = r$

{4}

12) $(6b)^{\frac{1}{2}} = (8 - 2b)^{\frac{1}{2}}$

{1}

13) $\sqrt{56 - r} = r$

{7}

14) $\sqrt{-10 + 7p} = p$

{2, 5}

15) $(18 - n)^{\frac{1}{2}} = \left(\frac{n}{8}\right)^{\frac{1}{2}}$

{16}

16) $\sqrt{2v - 7} = v - 3$

{4}

17) $-3 = (37 - 3n)^{\frac{1}{2}} - n$

{7}

18) $(-3 - 4x)^{\frac{1}{2}} - (-2 - 2x)^{\frac{1}{2}} = 1$

{−3, −1}

19) $x = 5 + (3x - 11)^{\frac{1}{2}}$

{9}

20) $2 = \sqrt{3b - 2} - \sqrt{10 - b}$

{6}